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ABSTRACT

This group-oriented workbook for teachers and administrators is a three stage guide to program planning, development, and evaluation. The first stage consists of identifying and ranking areas of concern in terms of value to students, staff, community or school board, and program. A learner goal needs assessment instrument, and a formal statement of ten educational goals (developed by the state of Pennsylvania) are presented as exercises for empirically describing areas of concern. During the intermediate stage, needs are converted into goals, and procedures for evaluating goal attainment are outlined. Evaluation is broadly defined to include affective, psychomotor, social, and cognitive needs. Charts for selecting tests related to the ten educational goals and for collecting and analyzing data are included. The final stage involves writing program objectives to reflect previously stated goals. Four teaching methods are described for achieving objectives: (1) reception--lecture method; (2) interpersonnal--class discussion; (3) selection--discovery learning; and (4) group processes. (CP)

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EVALUATION

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LEADERSHIP DEVELOPMENT TRAINING PROGRAM IN EDUCATION

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PREFACE

This Leadership Development Training Program in Education, Product Evaluation, is intended primarily for classroom teachers, supervisors, department heads, and building principals. The already busy teacher and administrator need a simplified program input for evaluating programs in school settings. Furthermore, they are not able to keep abreast of the growing literature on evaluation techniques. This workbook guide is intended to help the teacher-administrator use product evaluation to improve both the teaching process and the learning process. The guide is set up in three stages:

The Preliminary Stage consists of the rationale for program models, facility and organization, concerns, and needs assessment. Each phase is learner oriented.

The Intermediate Stage forces the educator to convert learner concerns and needs into goals to be attained by the planned model program. Statements of beliefs (hypotheses) as to what one thinks the model program will do for pupils, possible evaluation methods or devices, and listing of test instruments are the next important steps. In addition, instrument selection, data collection, and data analysis provide the educator with a comprehensive plan for evaluating the product. This evidence is used as feedback information to retain, redo, or eliminate educational programs.

The Final Stage consists of program planning and the ability to write precisely the program objectives reflecting the goals to be reached. While the intent of this program does not emphasize teaching methods, the last section discusses suggested teaching strategies for achieving certain learner goals.

We believe that teachers and administrators will eventually go beyond the limits provided in this workbook guide--when this occurs, change agents for building curricular programs in meeting the needs of the learner will appear.

Hopefully, then, this guide will enable more teachers and principals to reach their intended desire--the best possible educational program for their students.

Raymond Bernabei
Sam Leles

WORKSHOP GROUPING

This exercise is designed to help you differentiate among the elements of preliminary, intermediate, and final stages that go into model program planning development and evaluation. In addition, the activities of this exercise will attempt to guide you from preliminary to intermediate, to final stages of model program development and evaluation.

If you are working with others, then it is necessary for everyone to become directly involved in the action. Begin by establishing small groups. Each group (5 to 7 in a group) will have a discussion leader (the person with the most letters in his last name), and a recorder, (person with the least letters in his last name). In case of a tie, use both first and last names in the count and apply this criteria for selection. The discussion leader's function is to facilitate the flow of communication, ideas, interaction, suggestions, criticisms, and to secure decisions so that the group completes the specified tasks within the designated time. The recorder will enter decisions reached by the group in the appropriate spaces provided in the exercise.

If you choose to do this exercise alone, you may do so. However, remember that action in school environment generally requires group process.

Complete the following:

Group Number _____

Group Leader _____

Group Recorder _____

Group Participants _____

_____

_____

_____

_____

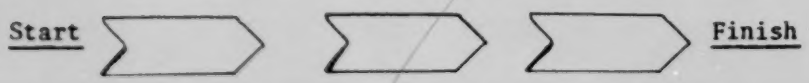
_____

PRELIMINARY STAGES

Directions:

Developing a model program is not typically a swift, single-stroke, short-run effort. It occurs more likely over a period of time passing through three stages of development: Preliminary, Intermediate, and Final.

STAGES



PRELIMINARY	INTERMEDIATE	FINAL
Rationale	Goals	Program Areas
Facility & Organization	Hypotheses	Program Objectives
Concerns	Program Concerns	Instructional Objectives
Needs	Product Evaluation	Learning Packets
	Test Instruments	Staffing Patterns
	Data Collection & Analysis	Cost Analysis
	Building Objectives	

Model program development is based upon considerations that occur in three stages:

(1) *Preliminary considerations* -- This refers to the substance of program development called planning. In developing this part of the model, you might ask, "What are the givens; what are the needs to be considered in the model you envision?"

(2) *Intermediate considerations* -- Here you might ask, "What are the intents; what do you wish to accomplish?" Essential to the model you envision are considerations dealing with "what to do" and "how to assess what you have done."

(3) *Final considerations* -- These are the mechanics of model development; the administrative operations and techniques useful to coping with specific tasks. Mechanics usually deal with "How to do it," and, "How much it costs."

Rationale:

Developing new programs or models begin when school systems and individuals have doubts, tensions, or unresolved problems about existing practices, programs, or organizations. It is often from these conditions that program developments or models emerge.

Model program development is a series of problem-solving strategies. It includes orientation, planning, data gathering, hypothesizing, formulating tentative solutions, testing, and evaluation. In many respects, model program development requires skills similar to problem-solving.

A local administrator expends great amounts of energy and time in exploring sources for problem-solving. Therefore, the purposes of this program are to serve you by:

(1) Providing an orderly body of knowledge about program planning, program development for staff utilization, and

(2) Engaging you in structured activities in which knowledge, understandings, and skills are used to devise models for program evaluation.

A model is a product of insight and imagination, devised and refined through an analytical and logical process. The purpose of a model is to describe relationships between logical and empirically based research data in a relatively simple way. If a model is to achieve its purpose, it must then possess two major properties:

(1) Be logically consistent, and

(2) Be empirically verifiable.

FACILITY AND ORGANIZATION

You are assigned to a school building in a community. The group is to decide:

(1) The general nature of the building--
(Open spaces, pods, conventional),

(2) The location--
(Urban, suburban, rural),

(3) The organizational structure--
(K-3, K-5, K-6, 4-6, 6-8, 7-8, 7-9, 9-10, 11-12, 9-12, 10-12, others),

(4) Organizational component for model development (one of #3 above) is a segment or part of the organizational structure,

(5) The number of pupils assigned to the building,

(6) The number of pupils assigned in the organizational component in #4. (This is the sample population or target area to zero in on).

Complete the following:

(1) Identify Building_____

(2) Identify Location_____

(3) Identify Organizational Structure_____

(4) Identify Organizational Component_____

(5) Identify the Number of Pupils in Building_____

(6) Identify the Number of Pupils in Component_____

Once this is decided, the first task in model development is to determine areas for improvement. Examine the way things are as compared to the way they should be. In other words, raise questions in your group: What are the areas of concern, and what needs to be done in this building to improve the quality of education? In identifying the why, you are essentially defining the needs of the learner. You are trying to bridge the gap between what is and what should be for the children attending that organizational component within a system.

Other groups who have worked on this area have identified the following concerns:

(1) Pupils need to be given more freedom for choice-making;

(2) Pupils need to be more self-directed;

(3) Pupils need to understand others;

(4) Basic skills need to be improved;

(5) We need new facilities;

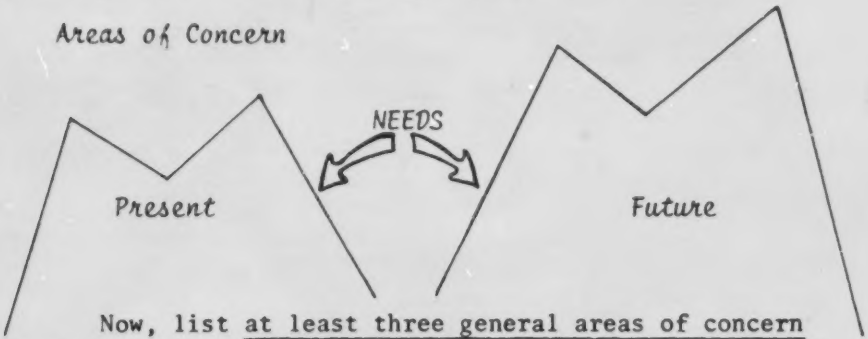
(6) A communication gap exists between school and community;

(7) More social studies should be offered;

(8) Mini-units in English should be devised.

These are but a few areas of concern intended to serve as examples.

In order for this to be meaningful to you, areas considered for improvement should emerge from concerns possessed by members of your group.



Now, list at least three general areas of concern as you conceive the present, related to the way you would like it to be. Note that areas of concern are not necessarily the same as Needs. Your needs are likely to emerge, however, from your areas of concern:

(1)_____
(2)_____
(3)_____
(4)_____
(5)_____
(6)_____
(7)_____
(8)_____
(9)_____
(10)_____

Next, rank the above areas of concern in terms of worth (value) to the community; value to the learner.

1st choice_____ 6th choice_____
2nd choice_____ 7th choice_____
3rd choice_____ 8th choice_____
4th choice_____ 9th choice_____
5th choice_____ 10th choice_____

CONCERNS CATEGORY

Now, categorize your choices into learner concerns, program concerns, staff concerns. Are your concerns: Non-graded? Continuous progress? Improving basic skills? Differentiated Staffing? Computer-assisted Instruction? Better offices? Better pupil understanding of others? Self-directed learning? Creativity? Developing a better self-concept?

LEARNER	PROGRAM	STAFF	BOARD/ COMMUNITY

NEEDS ASSESSMENT

Thus far, your concerns category consists of perceived needs (program, staff, and community) related to the learner. We have attempted to identify these needs using the method called "armchair philosophy." This is considered to be the first step in program development and program evaluation. You should now record these perceived learner needs on page 12 in the row labeled "AP" (armchair philosophy). State the need in goal concept form as suggested on page 11.

An attempt should be made to describe learner needs using an empirical base. In recent years, there has been an increased interest in goal definition and assessment of needs in education. Most efforts directed to the establishment and definition of goals and needs seem to take the form of generalizations or descriptive statements. Little, if any, data are available concerning empirical methods for defining each concept.

Goal statements have to do with the scope or purposes of education. They provide guidelines for program development efforts and evaluation. A perception of "where one wants to go" (known as goal statements) implies measurement. But the measurement at this point is very general and has to do with one's perception of the importance of goals.

Most efforts in identifying learner needs have been in the realm of basic skills achievement. However, if we truly believe that education means more than this, the first concern of a district is to be able to identify its priorities of learner goals. Only in this way can significant programs be developed by professional staff in support of community desires.

The formulation and adoption of Pennsylvania's Goals of Quality Education represent a major step toward the definition of a state's intents, making possible an assessment of its efforts for fulfillment of those intents. In

an attempt to further increase the utility of the goals for the practitioner and evaluator, the Quality Education Program Study was proposed in order to review, define, and clarify the ten goals.

The "general needs assessment instruments" developed by Bucks County Public Schools' Quality Education Program Study, can provide the means for a school district to assess its learner needs relative to the ten goals of quality education. The need may be generated from a state quality assessment program, or a self-initiated need to determine strengths of the educational program or to identify areas in which greater concentration may be deemed advisable. This instrument could also serve as a medium to acquaint constituents (parents and students) with the Goals of Quality Education (see page 13).

Now, attempt to rank order and match your perceived needs (on page 12) as determined through the method of "armchair philosophy" marked "AP" and through using the empirically based behaviors in the Quality Education Program Study Needs Assessment Instruments marked "EB". Needs represent a basis for planned programs. One method used to identify learner needs is to collect baseline data about the learner. Once collected and organized in a systematic way, you can then begin to make general statements about learner needs. Remember!! This is only one way for stating learner needs. You might wish to devise other ways.

Needs may represent or reflect societal values; board of education policies; external agencies or pressures; teacher-administration expectancies; legislative mandates; test scores; and other sources.

You are to identify the device used for determining these needs such as in the "B" Column on the following form.

List the Need in Concept Form	*Indicate How the Need was Determined*	*Describe the Need in General Statement Form*
A	B	C
Examples (Grade 5)		
1.0 Self-direction	1.0 Observation Checklist Random Sample (92) 5th Grade Pupils	Many 5th grade students are housed in self-contained rooms. Little opportunity exists for individualizing instruction. There is a need for pupil self-directedness in learning as identified by an observation checklist administered by teachers to a random sample of 92 pupils from the 5th grade.
2.0 Understanding Others	2.0 Student Unrest in Building during Athletic Events	
3.0 Basic Skills	3.0 Low Achievement Scores in Reading and Arithmetic	
4.0 Attitude Toward School	4.0 Parent Questionnaire	
8.0 Occupational Careers	8.0 State Assessment Findings	

Complete the following:

NEED (State in Goal Concept Form)	NEED DETERMINATION	GENERAL STATEMENT OF NEED

A P

E B

LEARNER GOALS NEEDS ASSESSMENT STUDY

_____SCHOOL DISTRICT

Most people are interested in quality education in their schools. As a citizen, parent, staff member, or student of the _____School District, we are seeking your opinion to help us plan better educational programs.

Included in this opinionnaire are statements of kinds of pupil behavior which were identified by people like yourself as representing the type of things children should do as a result of quality education.

Would you help us to identify and rank educational goals for our schools. Respond to these sixty-four items by indicating your preferences on the five-point scale. Your responses will remain anonymous; however, the total responses will be tabulated and used in identifying our learner goals priorities.

LEARNER GOALS NEEDS ASSESSMENT INSTRUMENT

Directions:

Read each statement and check the appropriate blank corresponding to the five-point scale provided below. This will indicate your opinion as to whether this type of task statement is important to our school system.

GOAL	STATEMENT	GOAL	Most Important 5	Important 4	Average Importance 3	Marginal Importance 2	Least Important 1	TTL.
1.1	Demonstrates competency on a task; willing to test competency on a task	1.1	_	_	_	_	_	_
1.2	Does extra work to improve capabilities or academic standing	1.2	_	_	_	_	_	_
1.3	Demonstrates accurate self-appraisal	1.3	_	_	_	_	_	_
1.4	Shows acceptable personal values	1.4	_	_	_	_	_	_
1.5	Shows favorable self-image	1.5	_	_	_	_	_	_
							Ttl.	
							Multiply total (TTL) by 2.0 = GT	

2.1	Works with or helps people different from self	2.1	_	_	_	_	_	_
2.2	Shows appreciation and understanding of different people	2.2	_	_	_	_	_	_
2.3	Shows interest in learning about different people	2.3	_	_	_	_	_	_
2.4	Works for a cause of different people	2.4	_	_	_	_	_	_
2.5	Shows positive attitude to own cultural group	2.5	_	_	_	_	_	_

Ttl. _____

Multiply total (TTL) by 2.0 = GT [ ]

3.1	Has reading comprehension skill; develops skill in reading comprehension	3.1	_	_	_	_	_	_
3.2	Shows comprehension of oral and visual materials	3.2	_	_	_	_	_	_
3.3	Has ability to communicate orally; develops or improves ability to communicate orally	3.3	_	_	_	_	_	_
3.4	Has ability to communicate in writing	3.4	_	_	_	_	_	_
3.5	Has skill in grammar, including phonics, spelling, vocabulary, handwriting	3.5	_	_	_	_	_	_
3.6	Has mathematical skills; has positive attitude relating to math skills	3.6	_	_	_	_	_	_
3.7	Shows logical thinking; actions are rational	3.7	_	_	_	_	_	_
3.8	Has foreign language skills	3.8	_	_	_	_	_	_
		Ttl.						
		Multiply total (TTL) by 1.25 = GT						

4.1	Shows positive attitude toward school	4.1	_	_	_	_	_	_
4.2	Contributes or participates in class activities	4.2	_	_	_	_	_	_
4.3	Makes special efforts through motivation	4.3	_	_	_	_	_	_
4.4	Desires to study or learn	4.4	_	_	_	_	_	_
4.5	Selects extracurricular learning activities	4.5	_	_	_	_	_	_
4.6	Has positive attitude toward one's own education	4.6	_	_	_	_	_	_
		Ttl.						

Multiply total (TTL) by 1.67 = GT[ ]

5.1	Is informed; uses democratic processes; approves right to dissent	5.1	_	_	_	_	_	_
5.2	Shows respect for flag and country	5.2	_	_	_	_	_	_
5.3	Is charitable or does community work	5.3	_	_	_	_	_	_
5.4	Shows concern for others	5.4	_	_	_	_	_	_
5.5	Helps others	5.5	_	_	_	_	_	_
5.6	Has good manners	5.6	_	_	_	_	_	_
5.7	Demonstrates responsibility	5.7	_	_	_	_	_	_
5.8	Shows team spirit - fair play	5.8	_	_	_	_	_	_
5.9	Shows respect for law, rules, regulations	5.9	_	_	_	_	_	_
5.10	Shows respect for property and environment	5.10	_	_	_	_	_	_
		Ttl.						

Multiply total (TTL) by 1.0 = GT [ ]

6.1	Has good health and grooming habits	6.1	_	_	_	_	_	_
6.2	Has good eating habits and proper weight	6.2	_	_	_	_	_	_
6.3	Encourages others to use good health habits	6.3	_	_	_	_	_	_
6.4	Takes correct action when injured or ill	6.4	_	_	_	_	_	_
6.5	Shows concern for another's illness or injury	6.5	_	_	_	_	_	_
6.6	Shows concern for health conditions	6.6	_	_	_	_	_	_
6.7	Participates in physical activities	6.7	_	_	_	_	_	_
6.8	Shows emotional maturity	6.8	_	_	_	_	_	_
6.9	Shows concern for emotional well-being of others	6.9	_	_	_	_	_	_
6.10	Shows concern for safety	6.10	_	_	_	_	_	_
		Ttl.						
		Multiply total (TTL) by 1.0 = GT						

7.1	Produces things that are unique	7.1	_	_	_	_	_	_
7.2	Researches information	7.2	_	_	_	_	_	_
7.3	Uses unusual treatment of school work	7.3	_	_	_	_	_	_
7.4	Uses unusual written or oral communication	7.4	_	_	_	_	_	_
7.5	Produces unusual artistic design or organization	7.5	_	_	_	_	_	_
7.6	Shows unusual talent in performing arts or physical activity	7.6	_	_	_	_	_	_
7.7	Shows problem-solving ability	7.7	_	_	_	_	_	_
		Ttl.						
		Multiply total (TTL) by 1.43 = GT						

8.1	Shows interest in career or education	8.1	_	_	_	_	_	_
8.2	Shows interest in extending knowledge for future career	8.2	_	_	_	_	_	_
8.3	Shows interest in improving grades to meet his/her career choice	8.3	_	_	_	_	_	_
8.4	Shows positive attitude toward education	8.4	_	_	_	_	_	_
8.5	Knows background information related to careers	8.5	_	_	_	_	_	_

Ttl.

Multiply total (TTL) by 2.0 = GT ☐

9.1	Shows appreciation for achievements of others	9.1	_	_	_	_	_	_
9.2	Has knowledge in area of human achievement	9.2	_	_	_	_	_	_
9.3	Shows interest in learning about human achievements	9.3	_	_	_	_	_	_
9.4	Tries or achieves in a form of human endeavor	9.4	_	_	_	_	_	_
		Ttl.						
		Multiply total (TTL) by 2.5 = GT						
10.1	Shows ability to adjust to changes in his life	10.1	_	_	_	_	_	_
10.2	Recognizes need for planning education or career	10.2	_	_	_	_	_	_
10.3	Keeps up-to-date	10.3	_	_	_	_	_	_
10.4	Interest in future events as they affect self and others	10.4	_	_	_	_	_	_
		Ttl.						
		Multiply total (TTL) by 2.5 = GT						

GOALS FOR QUALITY EDUCATION

Directions for "Weighting"

STEP I:

Obtain a sub-total (Ttl.) for each of the goals. This is done by multiplying the number of tally marks in each column (vertically) for each goal, multiplied by the weight (5, 4, 3, 2, 1).

STEP II:

Place each sub-total in appropriate vertical column. Add sub-totals across to obtain total (TTL).

STEP III:

Since the TTL is multiplied by a factor of 1.0 for Goals 5 and 6, use the same total in TTL and place this total in the rectangular box provided.

STEP IV:

Since Goals 1, 2, 3, 4, 7, 8, 9 and 10 have less than ten statements, get a sub-total; then "weight" the result by using the tables provided below. Place the grand total (GT) for each goal in the rectangular box provided. Follow the same directions as above for each goal.

WEIGHTING TABLES

Goals 1.0/2.0/and 8.0

If sum is:	Write the following figure in the box titled "Multiply by 2.0 = GT":
25	50
24	48
23	46
22	44
21	42
20	40
19	38
18	36
17	34
16	32
15	30
14	28
13	26
12	24
11	22
10	20
9	18
8	16
7	14
6	12
5	10

Goals 9.0 and 10.0

If sum is:	Write the following figure in the box titled "Multiply by 2.5 = GT":
20	50.
19	47.5
18	45.
17	42.5
16	40.
15	37.5
14	35.
13	32.5
12	30.
11	27.5
10	25.
9	22.5
8	20.
7	17.5
6	15.
5	12.5

Goal 3.0

If sum is:	Write the following figure in the box titled "Multiply by 1.25 = GT":	If sum is:	Write the following figure in the box titled "Multiply by 1.25 = GT":
40	50.	24	30.
39	48.75	23	28.75
38	47.50	22	27.50
37	46.25	21	26.25
36	45.	20	25.
35	43.75	19	23.75
34	42.50	18	22.50
33	41.25	17	21.25
32	40.	16	20.
31	38.75	15	18.75
30	37.50	14	17.50
29	36.25	13	16.25
28	35.	12	15.
27	33.75	11	13.75
26	32.50	10	12.50
25	31.25	9	11.25
		8	10.

Goal 4.0

If sum is:	Write the following figure in the box titled "Multiply by 1.67 = GT":
30	50.10
29	48.43
28	46.76
27	45.09
26	43.42
25	41.75
24	40.08
23	38.41
22	36.74
21	35.07
20	33.40
19	31.73
18	30.06
17	28.39
16	26.72
15	25.05
14	23.38
13	21.71
12	20.04
11	18.37
10	16.70
9	15.03
8	13.36
7	11.69
6	10.02

Goal 7.0

If sum is:	Write the following figure in the box titled "Multiply by 1.43 = GT":
35	50.05
34	48.62
33	47.19
32	45.76
31	44.33
30	42.90
29	41.47
28	40.04
27	38.61
26	37.18
25	35.75
24	34.32
23	32.89
22	31.46
21	30.03
20	28.60
19	27.17
18	25.74
17	24.31
16	22.88
15	21.45
14	20.02
13	18.59
12	17.16
11	15.73
10	14.30
9	12.87
8	11.44
7	10.01

QUALITY EDUCATION PROGRAM STUDY*

"Ten Goals of Quality Education for the Commonwealth"

BOOKLET A: Project Description

Describes the project including a background and overview and a detailed report of procedures used to collect, handle, and analyze the data. Includes appendices.

BOOKLET B: General Needs Assessment

Provides an instrument for districts to use directly the information developed by QEPS.
Instructions.
General Needs Assessment Instrument for the Ten Goals.

BOOKLET C: Characteristics of Incidents and Their Reporters

Gives a tabulation of various characteristics of reporters for each category and sub-category of student behavior.

BOOKLET C SUPPLEMENT: Supplement

Includes complete data collected as described in Booklet C.

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*George E. Raab and Raymond Bernabei. Quality Education Program Study. ESEA Title III Grant, Bucks County Public Schools, Intermediate Unit #22, Division of Curriculum and Instruction in cooperation with the Pennsylvania Department of Education, 1971.

Goals One through Ten each have two reports. The first is a description of the goals containing three basic components:

(1) The categories of student behavior
(2) Rationales for the areas of effective student behavior
(3) Related strategies

The second report is the needs assessment of that goal and contains:

(1) Instruction
(2) The needs assessment instrument for that goal
(3) An analysis of instruments related to that goal

GOAL ONE: SELF-UNDERSTANDING

Quality education should help every child acquire the greatest possible understanding of himself and an appreciation of his worthiness as a member of society.

> "Self-understanding should increase as the child matures. That is, he should become increasingly aware of his strengths and weaknesses, his values and interests, and aspirations, so that the decisions he makes about his educational and occupational future will be informed, reasonable, and rational. He should be helped to know the strengths in himself that he should exploit and the weaknesses that he should try to overcome or that he must learn to live with.
>
> On the other hand, regardless of the level and pattern of his particular talents, the school experience should be such that it

will strengthen, not damage, his self-esteem. The school should be operated in such a way that children at all levels of talent can achieve a growing awareness of their worth as persons in a society that claims to have an equality of concern for all its members."*

GOAL TWO: UNDERSTANDING OTHERS

Quality education should help every child acquire understanding and appreciation of persons belonging to social, cultural, and ethnic groups different from his own.

"The school experience should be such that the child will learn to respect and achieve an easy interaction with children who differ from him in physical characteristics (e.g., skin color), cultural traditions, economic status, religious beliefs, manner of speech, and degree of intellectual competence."*

GOAL THREE: BASIC SKILLS

Quality education should help every child acquire to the fullest extent possible for him, mastery of the basic skills in the use of words and numbers.

"These basic skills fall into four categories: (1) the ability to acquire ideas through reading and listening; (2) the ability to communicate ideas through writing and speaking; (3) the ability to handle mathematical operations; (4) the ability to reason logically

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and to respect evidence. The level of performance that can be reasonably expected in each of these areas will vary from child to child. However, since a civilized society depends crucially upon the verbal and mathematical literacy of its members, it is of profound importance that the level of expectation in these matters for any child shall not be underestimated or regarded as fixed, and that every effort be made to give him the mastery he needs to function effectively."*

GOAL FOUR: INTEREST IN SCHOOL AND LEARNING

Quality education should help every child acquire a positive attitude toward school and toward the learning process.

"The school experience should be such that the child finds the learning activities associated with it enjoyable and rewarding to the point that he is motivated to do well and to continue learning on his own initiative beyond the requirements of formal education. Everything possible should be done to ensure that the attitude of the teacher, the atmosphere of the school, and its physical condition shall contribute toward this end, so that the individual, both as a child and later as an adult, will hold education high among his values."*

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*Educational Testing Service

GOAL FIVE: GOOD CITIZENSHIP

Quality education should help every child acquire the habits and attitudes associated with responsible citizenship.

> "Of first importance among such habits and attitudes are (1) loyalty to the fundamental principles of a free democratic society as expressed through a readiness to defend its institutions, to bring rational criticism to bear on their defects, and to work for changes leading to their improvement; (2) effective participation in group activities by assuming the role of a leader or a follower as appropriate; (3) appreciation and acceptance of the necessity for earning a living; (4) acceptance of the basic ethical values that make group living possible--values characterized by such terms as honesty, fair dealing, and compassion for the less fortunate."*

GOAL SIX: GOOD HEALTH HABITS

Quality education should help every child acquire good health habits and an understanding of the conditions necessary for the maintenance of physical and emotional well-being.

> "In his own interest as well as in the interest of society at large, a child should know how to take care of himself and how to keep himself physically fit. He should know what the requirements are for physical and mental health and what practices, harmful to health, should be avoided. Mere knowledge of these matters,

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however, is not sufficient. In cases where the home has been deficient in encouraging the child to practice sound health habits, the school has an obligation to be aware of the situation, and to see that opportunity for remedying the deficiency is provided."*

GOAL SEVEN: CREATIVITY

Quality education should give every child opportunity and encouragement to be creative in one or more fields of endeavor.

"The notion of creativity has been variously defined. It is being used here to encompass worthwhile activities that a child initiates and pursues on his own--activities having an outcome that is perceived by the child himself and by others as a contribution to some part of his world. Such activities can be included in a wide variety of fields, not only the sciences and the arts, but also the organization of human affairs and the development and exercise of salable skills in the production of any of a host of practical things that enrich our way of living.

It is not to be expected that the creative behavior of school children will, except in very rare cases, lead to wholly original productions. What is expected is that many children, if given the chance, will become involved in exploring ideas and ways of doing things that are new and exciting within their

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own world. The school should make possible this kind of rewarding experience for all children, and should judge its success by its ability to evoke in children a flexible and creative approach to human affairs."*

GOAL EIGHT: VOCATIONAL DEVELOPMENT

Quality education should help every child understand the opportunities open to him for preparing himself for a productive life and should enable him to take full advantage of these opportunities.

"This goal implies that most children can profit from some form of education beyond high school, whether it be a four-year college, a school of nursing, a community college, a technical institute, or the like. The youngster should be aware of these opportunities and seek out the particular kind of education best suited to his talents and interests. This goal also implies that the school will provide the child with the kind of guidance that will enable him to do so.

Furthermore, the school should help him discover the practically unlimited possibilities for continuing self-development both in the world of work and in the world of the mind so that he will be motivated to pursue excellence in all the forms of human endeavor that are appropriate for him."*

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GOAL NINE: UNDERSTANDING HUMAN ACCOMPLISHMENT

Quality education should help every child to understand and appreciate as much as he can of human achievement in the natural sciences, the social sciences, the humanities, and the arts.

> "Insofar as possible every child should gain from his school experience an increasing openness to the life of the mind and an increasing ability to find meaning for his own life in the heritage of the past and in the intellectual thrusts of the present age. He should achieve some understanding of the transforming conceptions of modern science. He should achieve increasing mastery over the basic principles of the social and psychological sciences. He should develop a degree of sensitivity that enables him to differentiate the worthy from the worthless in the multifarious products of civilization as we know it--books, motion pictures, radio, television, music, the visual and performing arts, architecture, industrial design, and the like."*

GOAL TEN: PREPARATION FOR A CHANGING WORLD

Quality education should help every child to prepare for a world of rapid change and unforeseeable demands in which continuing education throughout his adult life should be a normal expectation.

> "The explosion in knowledge, the impact of science on the economy, the almost unpredictable nature of the job market for both the short term and the long term, the increase in the opportunity for

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leisure time activities--all these developments make it apparent that education, if it is to fulfill the life-long needs of the individual and the future needs of society, cannot stop at Grade 12 or Grade 14 or Grade 16. Such continuing education may take many forms. It may be self-education; it may be formally organized retraining; it may be adult classes of a recreational nature. Whatever the form, it must be regarded as an essential of an individual's activity through his adult life if he is to keep up-to-date as a worker, as a citizen, and as a person."*

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Goals:

The next task in model development is to convert needs (areas of concern) into a workable program. Needs represent a basis for planned programs. Using your areas of concern and needs, identify and list the goals to be attained by your planned model program. These goals must describe behaviors indicating desired changes. For example:

Each child is able:

GOAL 1.0 to acquire a greater understanding of himself and an appreciation of his worthiness as a member of society.

GOAL 2.0

GOAL 3.0 to acquire more fully for himself, mastery of the basic skills in the use of words and numbers.

GOAL 4.0 to acquire a positive attitude toward school and toward the learning process.

GOAL 5.0

GOAL 6.0

GOAL 7.0

GOAL 8.0

GOAL 9.0

GOAL 10.0

PROGRAM CONCERN

Identify the model program you think is needed for achieving the learner goals identified in "*Goals*." Then, write a narrative or rationale explaining your reasons for wanting to use your model program. You might wish to substantiate your choice with research data.

MODEL PROGRAM	RATIONALE FOR PROGRAM

HYPOTHESES

An area critical for demonstrating the success or failure of an innovation or model program development is a systematic method for collecting evidence. One way to get at this problem is to identify testable hypotheses related to needs, goals, or objectives of the program. List some statements of hypotheses which would provide you with necessary information. To get you started, several sample hypotheses are listed:

(1) Pupils in the model program will become more self-directed learners than pupils in the control schools.

(2) Pupils in the model program will have more favorable attitudes toward school than pupils in a conventional organization.

(3) Administrator leadership traits in the model program will have similar operating patterns as principals in conventional schools.

Unless we test significant aspects of what we believe the model program will do or will not do, we will continue to be criticized. Now, it is your turn!!

List as many hypotheses statements as your group is able to generate. Number each statement for coding purposes.

(4)_____

(5)_____

(6)_____

(7)_____

(8)_____

PRODUCT EVALUATION

Evaluation* is a process of relating program outcomes to goals and explaining the relationship in terms of program plans, objectives in context, and processes. Evaluation of outcomes provides information with which to determine the extent to which a program was achieved and to help you decide whether the program is to be continued, terminated, modified, or refocused.

Identify situations in which the presence or absence of designated behavior can be observed and recorded. Such situations might differ with each goal. Evaluation of certain goals may call for a pencil and paper test in a classroom situation; or for observation of pupil behavior on the playground, in the cafeteria, or in a classroom.

A comprehensive evaluation program should go beyond testing for the mere acquisition of specific skills, facts, and knowledge from the cognitive domain. It should extend into measurement of the pupil's ability to interpret, to evaluate, or to extrapolate information so as to solve real problems. It should enter into the affective domain of attitudes, motivations, interests, adjustments, anxieties, and ideals. It should include physical and social development.

There are many techniques and devices for such evaluation, but the choice of a particular technique or device still depends upon many factors such as the objective of the program, the availability of published instruments, and the sophistication of persons using the technique and device. A partial list of possibilities that might be helpful to program developers follows:

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*From Evaluation Design for Project Writers, Draft: A Script Program, U.S.O.E., PACE.

General Categories of Objectives	Possible Evaluation Methods or Devices
Cognitive Domain Knowledge of subject matter, problem-solving skills, skills of application of concepts acquired, memorization of facts, achievement in reading comprehension, skills in numbers, languages, and other academic areas.	(a) Use of standardized tests; achievement test of all types, reading tests, readiness tests, rating scales, checklists, intelligence and aptitude tests, critical thinking tests, creativity tests, general ability tests.
Affective Domain Attitudes, motivations, interests, adjustments, anxieties, and ideals.	(b) Teacher-made tests: Objective tests of all types, performance tests, essay tests using recall, relationships, and application of facts, various observation techniques, questionnaires, rating scales, dropout counts, record of parent involvement, case studies, anecdotal records, attendance records, autobiography: interviews, sociometry, role playing, interactional analysis, critical incident techniques, pictorial and verbal projective techniques interest inventories, self-reporting and observational personality and adjustment inventories.

General Categories of Objectives	Possible Evaluation Methods or Devices
Continued	Continued
Psychomotor Domain (Physical Development)	
General health and ability, speech motor skills and dexterity	Health and physical fitness tests, observation
Social Development	
Acceptance, recognition, belonging, leadership, interaction.	Observation techniques, role playing, interviews, classroom observations, interaction analysis, critical incident techniques, sociometry, pictorial and verbal projective technique, autobiography, and anecdotal records.

To facilitate the reporting of such situations, the following chart may be useful. (See Page 50.)

TEST INSTRUMENTS

Now that the goals have been identified and the hypotheses statements formulated, select all possible evaluation methods or devices suggested under "Product Evaluation" and record them in the third column on page 50.

Identifying test instruments and selecting procedures becomes one of the most difficult of all tasks facing the educator. While one may choose a test instrument on the basis of its commercialized appearance, information concerning the identification and selection of test instruments for assessing pupil development is needed. Books, articles, research papers, and speeches provide the basis for developing a logical and systematic means to identify appropriate and valid test instruments. This process was used by teams of experts in identifying and selecting instruments for assessing pupil development with regard to the Ten Goals of Quality Education. The research project, QEPS, provides the educator with the criteria used for identifying and selecting test instruments. The title, form, author or publisher, date, grade level, and test description are included. In addition, a goal cross-reference code number is used to identify more readily the reference in which the instrument was found.

TEST INSTRUMENT SELECTION

To facilitate the use of the QEPS materials, the following samples represent a partial listing of instruments related to each goal statement. It is the responsibility of those who are teaching the children to select appropriate instruments in assessing progress toward goals intended.

GOAL	INSTRUMENT	DESCRIPTION
1: Self-understanding	Survey of Personal Values	Designed to measure six values influencing the manner in which an individual copes with the problems and choices of everyday living: practical-mindedness, achievement, variety, decisiveness, orderliness, goal orientation.
	Self-Esteem Inventory (SEI)	Measures four subscales: Self, social, home, school. 58-item inventory
	Study of Values	Determines extent to which a person has begun to develop a value complex
2: Understanding Others	California Test of Personality	15 scores: Social standards, social skills, anti-social tendencies, family relations, school relations or occupational relations, community relations, total social adjustment, total adjustment

GOAL	INSTRUMENT	DESCRIPTION
2: Understanding Others (cont'd)	Purdue Master Attitude Scales	A scale for measuring attitude toward any group. A revision of A Scale for Measuring Attitude Toward Races and Nationalities.
	Beliefs about School Life	Affective domain. Measures tolerance of other races, understanding of other races, and ethnic groups.
3: Basic Skills	Iowa Test of Basic Skills (ITBA)	Contains five basic tests: vocabulary, reading comp., language skills, work study skills and arithmetic skills. Emphasizes use of knowledge rather than rote memory. 96-page booklet (1,232 items) but no more than 507 items attempted by any one grade. Testing time: 316 mins.
	Cooperative Mathematics Tests	Series of five end-of-course achievement tests used for modern math. Time varies according to tests.

GOAL	INSTRUMENT	DESCRIPTION
3: Basic Skills (cont'd)	Sequential Tests of Educational Progress (STEP)	Battery consists of seven tests which stress use of knowledge and communication skills. Covers science, social studies, math, reading, writing, and listening tests.
4: Interest in School and Learning	Demos D Scale	29-question scale measures attitudes toward any high school.
	School Interest Inventory	150-item scale measures interests in school
	Survey of Study Habits and Attitudes (SSHA)	Identifies students whose habits/attitudes prevent their taking full advantage of educational opportunities. Seven scores give diagnostic profile and total study orientation score.

GOAL	INSTRUMENT	DESCRIPTION
5: Good Citizenship	Peltier-Durost Civics and Citizenship Test	A measure of: Extent of student knowledge in civics and citizenship, student attitudes, and beliefs in this area
	Activity Scale	A 24-item scale. Assesses students actual and desired political-social activism in terms of physical participation, communication activities, and information-gathering activities.
	Sequential Tests of Educational Progress (STEP)	Understanding of social change, identify values, distinguish fact from opinion, economic wants, etc.
6: Good Health Habits	An Inventory of Certain Practices on Health	88 statements measure health behavior from standpoint of the student's practices
	Scale for the Measurement of Attitudes Toward Healthful Living	A Likert type scale, contains 100-items constructed to evaluate opinions in 12 health areas

GOAL	INSTRUMENT	DESCRIPTION
6: Good Health Habits (cont'd)	Health Behavior Inventory	15 scores: Nutrition, personal cleanliness and skin care, mental health, personal health, community health, infection and disease; practices, attitudes, knowledge.
7: Creativity	Consequences	2 scores: Ideational fluency and originality. 10 items. Isolate factors in creative thinking
	Christensen-Guilford Fluency Tests	4 tests in which the examinee writes words to meet the following criteria: word fluency, ideational fluency, association fluency, expressional fluency
	Torrance Tests of Creative Thinking	10 tests grouped into a verbal and pictorial battery. Scores are based on fluency, flexibility, originality, and elaboration; measures divergent production.

GOAL	INSTRUMENT	DESCRIPTION
8: Vocational Development	Strong Vocational Interest Blank for Women	Provides 58 occupational scales plus ten basic interest scales. Administrative indices.
	Strong Vocational Interest Blank for Men	22 homogeneous basic interest scales. Administrative indices. Aids in predicting success and satisfaction in occupation. Machine-scoring only.
	Minnesota Vocational Interest Inventory (MVII)	Measures interests in occupations for which a college education is not required. Test presents 158 statement-triads. Within each triad, examinee chooses statement liked best and liked least. No time limit. Requires approximately 45 mins.
9: Understanding Human Accomplishments	Stanford High School Arts and Humanities Test	Tests knowledge and understanding in areas of classical and contemporary literature, music, art, drama and philosophy

GOAL	INSTRUMENT	DESCRIPTION
9: Understanding Human Accomplishments (cont'd)	Graves Design Judgment Test	Measures aptitude for appreciation or production of art. 90 sets of two and three dimensional design
	Tests of Educational Progress in Music, Art and Literature	True/false scale measures awareness of works of famous composers, artists, and writers
10: Preparation for a Changing World	Cassel Group Level of Aspiration Test	Measures discrepancy between real world and world perceived by subject; measures levels of aspiration, reality adjustment, delinquency, and proneness.
	Billett-Starr Youth Problems	Problems checklist: Personal finance, interests, and activities, planning for future
	Do You Agree?	25 problem situations and four courses of action that would be best on the part of the person faced with the choice

INSTRUMENT SELECTION FORM

Using the Quality Education Program Study (QEPS) booklets, identify, select, and record the test instruments you consider related to each goal and hypothesis. You may identify and select more instruments than needed. A sample of selected instruments related to Goal One of quality education is included for your use in this exercise.

GOAL NO.	HYPOTHESIS NO.	EVALUATION METHODS or DEVICES	INSTRUMENTS
Example:			
Self-Concept	1	Self-Report Inventory	Coopersmith Self-Esteem Inventory
		Personality	SPV Personality Test

INSTRUMENT SELECTION and DATA COLLECTION (LEARNER)

Select and Record the Instrument(s) Most Closely Related to Testing Your Hypothesis and Goal			COLLECTION TECHNIQUE				
			Administration Dates		Sample No. & Kind	Method of Admin.	Personnel Respons-ible
GOAL NO.	HYPOTH-ESIS NO.	INSTRUMENT	Control Pre/Post	Exp. Pre/Post		Group Indiv.	Tchr.Cslr. Prin.Eval.
Ex. #1	1	(a) SPV Personality Test	9/72 5/73	9/72 5/73	Random 50	Group	Counselor
		(b) Coopersmith Self-Esteem Inventory	9/72 5/73	9/72 5/73	Random 50	Group	Counselor

DATA ANALYSIS

Once the learner goal has been identified, a stated hypothesis is made; the instrument is selected for testing; the data collection technique has been agreen upon; the next step is to determine the method for analyzing the data. Examples for analyzing data related to statements* of hypotheses are given below:

Learner

Goal 1. Pupils in the model school will become more self-directed learners than pupils in the control schools.

Collect data at 3-4 randomly spaced intervals throughout school year in both the Experimental and Control Schools. Chi-Square tests might be used to analyze data; proportions might be tested for significance.

Goal 1. Pupils in model school will hold more adequate "self-concepts" than will pupils in the conventional schools.

One's perception of individual worth, ability, and adequacy is as good a predictor of academic tasks as is an I.Q. test score.

Use projective instrument (Combs Picture Story Test) or observe from structured situations.

Draw stratified random samples, test them, and make comparisons between schools.

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*Modified from Hypotheses Section of: The Emergent Middle School by William M. Alexander and others, New York: Holt, Rinehart & Winston, Inc., 1968.

Goal 3. Achievement of model school pupils on standardized tests will better those of pupils in traditional schools.

Group test -- mental ability
Collect data- chronological age
- social class background
Provide statistical control through analysis of variance or analysis of covariance.

Goal 4. Pupils in the model school will have more favorable attitudes toward school than pupils in conventional organization.

60-item Pupil Attitude Inventory by Battle (University of Florida); scores are additive; use analysis of variance.

Goal 4. Pupil absenteeism in model school will be less than that of pupils in conventional school.

Goal 6. Model school pupils will equal or exceed pupils in conventional schools on standard measures of physical fitness and health.

Use AAHPER Youth Fitness Test and Health Behavior Inventory Analysis of Variance. Test for significant differences.

Parent

Goal 1. Parents of model school children will have more positive attitudes toward the objectives and procedures of school than ones of conventional schools.

Use Parent Attitude Scale (Univ. of Fla.)

Use stratified random sampling.

Staff

Goal 1. Leadership traits of administrator of model school will have similar operating patterns as principals in conventional schools.

A number of useful instruments:

Principal Behavior Check List
Leader Behavior Description Questionnaire
Organizational Climate Description Questionnaire
Executive Professional Leadership Scale

Goal 2. Teachers in model school will be more open to change.

One possible instrument to assess readiness for curriculum change -- Duncan's Curriculum Improvement Measure.

Analysis of variance or t-tests might be used to assess the significance of differences between teachers in Experimental and Control Schools.

Goal 3. Teacher turnover will be less in model school than turnover in conventional school.

Descriptive statistics using percentages.

Now, try your hand at describing the method you will use to analyze data collected. It may be necessary for you to consult with a statistician.

GOAL No.	HYPOTHESIS NO.	ANALYSIS METHOD

Program Area:

Planning is a means for change in a system and in a sense is a function. Since planning deals with uncertainities, goal clarification is an important first step. It describes what is to be done.

Translating how the goals or objectives will be put into operation is programming. Program objectives should serve the same goals. Programming is an out-put activity and should be geared to particular goals; i.e., vocational education, as a program is much too broad to be used as a basis for allocating resources. Development of specific program skills is needed. The program format for vocational education should be built around objectives related to sub-components of a program area.

Concerns, needs, goals, and hypotheses generally evolve by identifying the means for putting a program into action. For example, increasing an understanding of the world of work could be a legitimate concern and need for pupils in a certain school system. This goal-oriented behavior may be achieved by specifying types or kinds of instructional programs.

It is here that the educator must decide what subject area is best suited to meet the needs, concerns, and goals for the pupils in his building. Some curriculum directors or principals break a subject area into parts; others add new programs. For example, mathematics, science, industrial arts, and foreign language subject areas have frequently included "understanding the world of work" as an objective. Yet, due to many program inadequacies, other program areas such as vocational-technical education, have been added to the school curriculum. It is here that one must identify the subject area.

Using the model program identified on page 37, determine the subject area best suited as a means for changing behaviors of pupils identified in the plan. List the areas below.

SUBJECT AREA	
1.0	
2.0	
3.0	
4.0	
5.0	
6.0	
Etc.	

PROGRAM OBJECTIVES

Having gone through the process of examining your values (concerns), identifying some related learner needs, deriving some generalizations from the data collected, and specifying the program areas, you are now ready for the next step. Your generalized statements of needs served as a basis for describing meaningful goal-oriented behavior, and statements of hypotheses. You are now ready to write program objectives.

A program objective is a written description of expected results through performance of a particular activity or series of events or tasks. Program objectives are sometimes considered as terminal behaviors of students following a long period of instruction.

To help you deal with the problem of specificity in writing program objectives related to goals and hypotheses statements, several examples are listed below.

Remember, you are devising <u>program objectives</u> for a specific group of students.

GOAL	AREA	SAMPLE PROGRAM OBJECTIVES
3.0	Reading	Through utilization of individualized instruction, each pupil enrolled in reading (Grade 5) will increase his skill for recognizing words and comprehension in interpreting.
4.0	Reading	Through individualized instruction, Grade 5 pupils will improve their attitudes toward reading.
3.0	Mathematics	Utilizing the Uni-Pac, or Curr-Card System, the 5th Grade pupils will show an increase in reasoning and application scores.
5.0	English/ Social Studies	Insure that each pupil leaving Grade 11 is able to read and comprehend political and economic news in order to function as a literature voter and citizen.
2.0	Social Studies/ English/ Health Education	By 1976, the celebration of the 200th Anniversary of our Declaration of Independence, reduce to less than 3% the number of graduating high school pupils who are racially prejudiced.

Your task now is to develop and formulate specific program objectives. Use page 60 for this purpose.

Remember, they must be goal-oriented, clearly stated, observable and measurable.

GOAL	AREA	SPECIFIC PROGRAM OBJECTIVES

You have now completed the initial task of establishing a systematic model for program development. You have also devised a logical system for program evaluation. A sample conceptual goal-objective-hierarchy model related to program development and evaluation is next illustrated for reference purposes.

GOAL OBJECTIVE HIERARCHY MODEL
(SAMPLE)

TARGET: 50-55% Grade 5
Willow Elementary School
Ten Buck, USA

CONCERN: According to a survey of classroom teachers, majority of pupils are not self-starters. They have poor math skills and reading ability.

NEED: Devise strategy to promote self-initiative and self-responsibility. Improve math skills and reading comprehension skills.

GOAL:
1. Improve Self-Understanding
2. Improve Basic Skills in Math and Reading

MODEL PROGRAM: Individualized Pupil Learning Packets devised by classroom teachers;

Learning Centers established containing multi-sensory materials;

Learning Materials Specialist for administering treatment based on diagnosis.

SUBJECT AREA: Math and Reading

PROGRAM OBJECTIVE:

Within one school year, by using the Curriculum Card Learning Packet for Teachers and Individualized Pupil Learning Packets for Pupils, of the majority of 5th graders identified as poor self-starters and low basic skill achievers, 30%-50% will show the following:

1. An achievement gain in reading comprehension by 20%-30% as measured by (Name of Test) Standardized Test and/or Teacher-Team Made Test;

2. A significant gain (.10 level) on a pre-test post-test measure of self-understanding using the Tennessee Self-Concept Test.

INSTRUCTIONAL PERFORMANCE OBJECTIVES* : Subject Area	Learning Domain		
	Cognitive	Affective	Psychomotor
Reading			
Math			

Suggested teaching strategies will now be discussed as a means for implementing your conceptual model.

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*For skills in writing behavioral instructional objectives, use:

Sam Leles and Raymond Bernabei, Writing and Using Behavioral Objectives: A Learning Packet for Teachers, Students and Administrators. University Supply Store, University, Alabama (1969) $3.25.

Raymond Bernabei and Sam Leles, Behavioral Objectives in Curriculum and Evaluation, Kendall/Hunt Publishing Co., Dubuque, Iowa (1970) $2.95.

Raymond Bernabei, Behavioral Objectives: A Self-Instructional Slide-Audio Tape Program (4 series of slides and tapes on identifying, writing, and analyzing behavioral objectives). Bucks County Public Schools, Intermediate Unit #22, Division of Curriculum & Instruction, Doylestown, Pennsylvania (1968) $85.00.

TEACHING STRATEGIES

Management by objectives represents a tool by which functions of school organization are translated into measured work performed in sub-units called classrooms, departments, and areas. If the goals or objectives of school organization are effectively converted into instructional objectives, then persons working at various levels in the organization are likely to contribute to the healthful maintenance and growth of the school organization.

Establishing and maintaining continuity and cohesion in an organization is especially important for school systems. Schools generally have not had the tradition, knowledge, nor expertise essential to bring together the goals and purposes of administrators, boards, department heads, and classroom teachers.

To use management by objectives principles, one must begin by distinguishing between objectives that are managerial from those that are instructional. Management objectives are identified typically with work and with positions related to a unit of the organization. Instructional objectives, meanwhile, are associated with classrooms or sub-units of school organization.

At present, many educators have the knowledge and skill to write instructional objectives. However, much of the work of writing instructional objectives is limited to planning work. Furthermore, instructional personnel frequently encounter great difficulty in implementing, or carrying out, or teaching planned for objectives. A number of conditions account for this discrepancy.

In the opinion of the writers, one explanation for the discrepancy between planning-writing objectives and implementing-using objectives is found in the skills and competencies that distinguish instructional planning work from instructional implementation work. To plan for instruction is not the same as implementing instructional plans.

Implementing or putting-into-practice instructional objectives requires knowledge, understandings, and skills that are essential to teaching methods. In other words, it is methodological expertise or competence that converts an instructional objective into a learning outcome. Objectives are results of learning and not activities designated to produce desired results.

The following description and explanation of methods provides educators who produce instructional objectives, a conceptual framework with which to systematically organize elements basic to teaching those objectives.

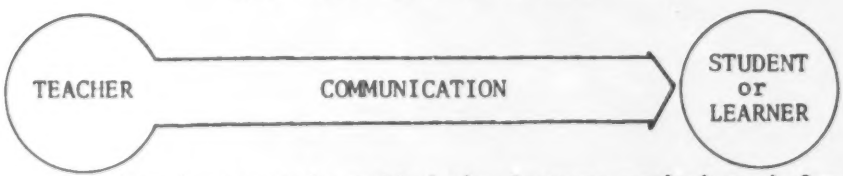
The idea of a specific teaching method presupposes that a teacher is able to use a distinct or discrete teaching method for a given period of time. In this case, instructional strategy or method also refers to instructional work with a model which, in reality, is a part of overall performance. Actually, the overall teaching performance is a mixture of a number of basic strategies or models. The model is a creation or product of the human mind. As such, a model is a tool or construct that helps educators cope with real instructional and learning problems. Teaching, because it is a highly complex activity, requires use of models that help distinguish some of the specific acts associated with teaching.

This description and explanation of instructional methods is based upon the assumption that teaching is essentially a matter of communication. That is, much of teaching is directed to moving one set of ideas from one location in the classroom to another location in the classroom. For example, when the teacher lectures, ideas from the teacher's notes, mind, or book (or some other source) are transmitted into the mind or cognitive structure of students. If a reading assignment is made, instructional intent is to transmit whatever ideas are in the assigned materials, into the cognitive framework or mind of students.

If the teaching-learning process is predicated upon communication theory, then it is important to recognize that it is the learner--and not the teacher--who really controls the instructional setting. Teaching practices that ignore this are likely to produce psychological drop-outs in the classroom. Psychological drop-out describes students who are skilled at giving the semblance of involvement and of learning while, in reality, being disengaged from personal learning in classrooms and schools.

In terms of communication theory, there are four instructional models or so-called methods of teaching. Using communication theory, we can identify and describe some of the specific teaching skills and characteristics associated with each of the four methods or strategies which are: (1) *RECEPTION STRATEGY*, (2) *INTERPERSONAL STRATEGY*, (3) *SELECTION STRATEGY*, and (4) *GROUP PROCESS STRATEGY*. By differentiating among these four teaching methods, a basis is established for securing the specificity needed to describe and modify behavior patterns of teachers.

RECEPTION MODEL OR METHOD



What is commonly called the lecture method or information giving method is, from the learner's viewpoint, a reception method of teaching. The model shows communication flow as being uni-directional in the reception strategy. While nominally under the direction of the teacher, communication is really controlled by the student or learner. It is the student who psychologically determines what "to hear," what "to remember," and what "to learn." Although the learner is the recipient of the teacher's lecture, he has little control over the nature or extent of the communication. Furthermore, it is the student who is held responsible for selectively

using portions of the communication with which to generalize or conceptualize. This method, while it is in line with general practices, also holds the student responsible for reliably selecting those elements of the communication with which the teacher measures or tests the student's learning.

Instructional factors basic to the *RECEPTION METHOD* include a number of things. First, the teacher needs and demonstrates an adequate subject-matter background relative to the content he communicates. Second, the teacher has skill in logically structuring the content he communicates. This does not mean using the sequential pattern found in the textbook or in a guide. Third, the teacher has and uses verbal skills in articulating the given communication.

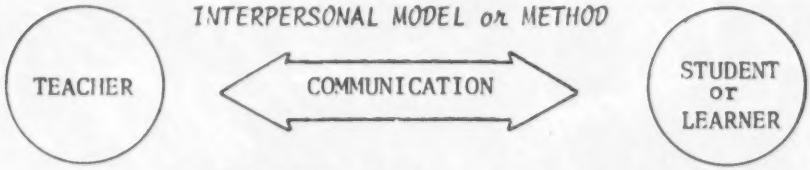
The *RECEPTION MODEL* casts the teacher in the role of disseminating information-data-facts-statements, whereas the learner is called upon to retrieve (by recalling, remembering, identifying, recognizing, etc.) selected portions of that information in order to verify what was taught. We might also note that in the *RECEPTION METHOD*, the learner involvement is passive or covert while that of the teacher is active or overt. Several assumptions are basic to the *RECEPTION STRATEGY*:

(1) The teacher's logical organization of content can be effectively transmitted to students.

(2) The subject matter or content used by the teacher is appropriate, relevant, and meaningful to the students.

(3) The learning derived with this content has use for a time period that is in the future rather than being for the present.

The *RECEPTION METHOD* of teaching, while widely used, is suited to implementing objectives for learning groups with verbal capabilities and interests that approximate the planned-for-objectives. The *RECEPTION MODEL* is useful to disseminating basic factual information for a limited time period to relatively large numbers of students. It is one method of teaching, and not the only method of teaching. The *RECEPTION MODEL* should be used with great discrimination with students diagnosed as being verbally impaired. Objectives associated with this strategy are usually written in terms of knowledge outcomes.



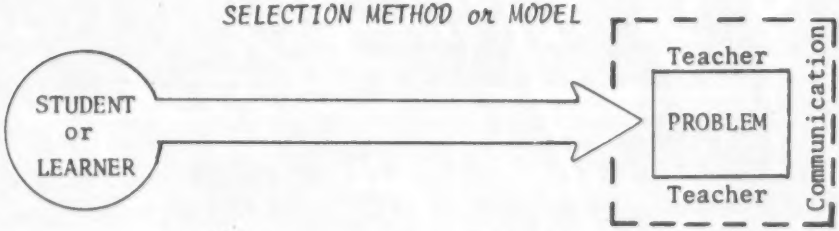
The *INTERPERSONAL METHOD* of teaching is characterized by two-way communication between a teacher and one student. This method resembles what is often called the class discussion method of teaching. While the *INTERPERSONAL METHOD* most frequently takes place in a classroom or group setting, the effects of the communication are between the teacher and a single student.

The manner by which the teacher handles this interactive communication is basic to establishing and maintaining an *INTERPERSONAL METHOD* of teaching. Conditions basic to the *INTERPERSONAL STRATEGY* include the following: (1) control of communication rests equally with teacher and student; (2) the teacher-student relationship rests upon the teacher using INFLUENCE rather than AUTHORITY, and/or POWER in communication with a student; and (3) the interaction between teacher and student is characterized by mutual questioning, mutual clarification, and mutual understanding. These are essential to generating feelings, dispositions, sentiments, and classroom atmospheres in which students are likely to assume greater roles for their own

learning rather than rely upon the teacher to provide "right" answers.

Therefore, the *INTERPERSONAL METHOD* of teaching casts the teacher in a role in which teaching behaviors are non-directive, facilitating, and clarifying. In essense, the teacher in this role is a resource person. The learner and teacher are overtly involved in the *INTERPERSONAL METHOD* of teaching and the teacher uses knowledge or content as a vehicle for learning, and not as an end in itself. While the *INTERPERSONAL MODEL* is typically applied within a classroom setting, it is also evident in activities associated with individual conferences, independent study, or in individualized work. The *INTERPERSONAL MODEL* of teaching is closely identified with process teaching and with learning viewed as a change in human behavior.

The *INTERPERSONAL METHOD* of teaching is basic to implementing objectives describing effective uses of teacher-learner human relations. Objectives written in terms of the more complex mental operations, that is 3.0 through 6.0 (application through evaluation) are appropriate to implementation by the *INTERPERSONAL METHOD* of teaching. This is a method likely to be used by teachers with instructional competence together with healthy, positive personalities. Educators who are threatened by learning variations, ambiguities, and individual differences are not likely to draw upon the *INTERPERSONAL METHOD* of teaching. Objectives associated with this strategy might be written both in terms of product outcomes as well as performance outcomes.



From the learner's viewpoint, the *SELECTION METHOD* is typified by problem-solving, inquiry learning, or discovery learning. Basic factors present in this strategy include: (1) the learner selects and controls the elements he uses and arranges for his needs or requirements; (2) the learner interacts with a problem situation, and (3) the teacher is responsible for arranging the problem situation so that the learner might efficiently and effectively make sense out of it.

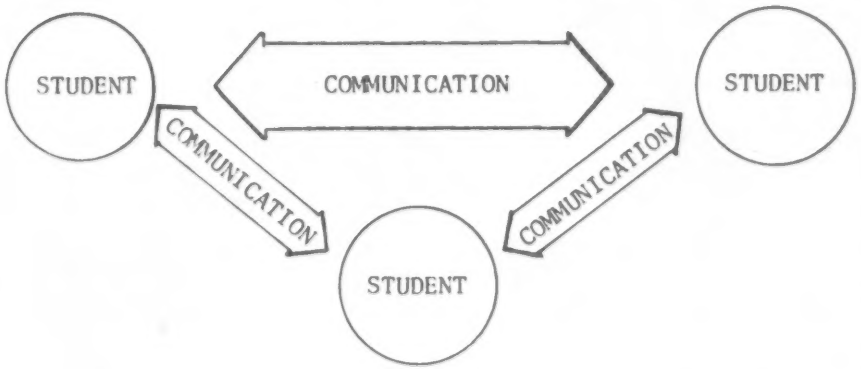
A number of instructional skills are essential to the *SELECTION METHOD* of teaching. First, the teacher must present factual data and information so that facts are ordered relative to a given concept (like taxation, personal health, pi, valence, colonialism, federalism, marriage, etc.) rather than being disordered relative to the concept. Second, the teacher must clarify relationships operative to the problem situation of the student. Next, the teacher is responsible for relaxing and freeing the student so that he might shift key factual elements into new patterns, new conceptual schemes, and new configurations. Fourth, the teacher must provide ample opportunity and adequate time frames for the learner to relate factual elements with each other and with the identifiable wholes represented in the student's problem. Fifth, the teacher must provide appropriate reinforcement to the learner so that he sees himself as likely to succeed rather than seeing himself as unsuccessful in handling the concept or problem under study. Finally, the teacher arranges factual data so that critical cues or clues contribute to the learner's understanding of the concept. From this understanding emerge the opportunities by which the learner then validates his own judgments.

This method of teaching presumes the multiple usage of materials, learner activities, and evaluative tools and techniques. Learning resulting from the *SELECTION STRATEGY* has utility in terms of values that are immediate and personal rather than being deferred and impersonal. In

the *SELECTION MODEL*, the student is more overtly involved in the learning process whereas the teacher's role tends to be more non-direct or facilitating. In addition, the teacher must not only be competent to organize the content logically, but must be skilled so as to order the process of learning psychologically.

The *SELECTION METHOD* of teaching is suited to achieving most often, objectives requiring relatively long intervals of time. Because the *SELECTION METHOD* places emphasis upon attitudinal development as well as upon mental operations, it is necessary that objectives be used that call for learnings derived through complex mental operations; that is, cognitive processes of application, analysis, synthesis, and evaluation. While objectives associated with the *SELECTION METHOD* are often written in terms of knowledge outcomes, this method of teaching is also appropriate for achieving product and performance outcomes. This means that affective as well as cognitive objectives are suited to the *SELECTION METHOD*. It also means that this strategy is appropriate to teaching for objectives describing learnings for the entire range of cognition; from the simple retainment of knowledge through application and analysis to evaluation.

GROUP PROCESS METHOD OR MODEL



The *GROUP PROCESS METHOD* of teaching is characterized by intercommunication among three or more people. A factor basic to the *GROUP PROCESS STRATEGY* is the recognition and understanding that there is a sharing of control of communication among those composing the group.

Teaching skills that are essential to the *GROUP PROCESS METHOD* of teaching include the creation and maintenance of a physical and social setting that is conducive to open, free, and effective communication among group members. Group process communication is facilitated when care is given to establishing a suitable structure of communication. The structure of communication is affected by considerations of group size, by the setting in which the group assembles and deliberates, and by the position provided group members. Other considerations basic to establishing and maintaining effective group processes are the flow of communication, and the frequency with which the communication occurs.

In addition, the teacher must recognize that goal oriented behavior is socially achieved and not individually attained through use of the *GROUP PROCESS METHOD* of teaching. Therefore, the realm of decision making in which the group may operate should be clear, and should provide for full development of norms and sentiments and the sharing of norms by the group. Instructional competence also is needed to establish a social and emotional climate characterized by feelings of acceptance. Finally, the teacher must arrange for and provide feedback on the success of group efforts and provide opportunities for group decisions to be implemented.

The teaching role in the *GROUP PROCESS MODEL* is that of a resource and of a procedural-information-giving person. This method involves students overtly whereas the teacher's behavior is more passive than active. Student learning associated with the *GROUP PROCESS METHOD* is generated from cognitive mental operations that range from the most simple

to the most complex. In addition, the *GROUP PROCESS METHOD* affords considerable opportunity for the attainment of affective objectives.

The *GROUP PROCESS METHOD* is most appropriate for learnings with a social significance. This is a method which, when properly applied, can help students or learners clarify and prescribe ways or procedures by which a substantive problem is mediated or solved. The production of knowledge, information or data is incidental or secondary to the mediation and/or solution of the social problem or issue. Therefore, explicit objectives associated with the *GROUP PROCESS METHOD* are generally performance and/or product outcomes rather than knowledge outcomes.

Implementing planned for instructional objectives is a function of methodological competence. Appropriate uses of instructional methods convert planned objectives into realized learnings through successful implementation of the planned objectives.

To assist educators to move planned objectives into implemented objectives, the writers identified and described four (4) different methods of teaching, namely: *RECEPTION STRATEGY, SELECTION STRATEGY, INTERPERSONAL STRATEGY, and GROUP PROCESS STRATEGY.*

The descriptions about each of these four methods show that all objectives cannot be implemented by the same method of teaching, or by indiscriminate use of methods. For example, those objectives that result in performance outcomes are less suited to the *RECEPTION STRATEGY*, and more likely to be attained by use of the *INTERPERSONAL and/or GROUP PROCESS METHODS.*

In addition to using methods to differentiate instructional objectives, distinctions among instructional objectives can also be made on the basis of outcomes or

outputs resulting from a particular objective. That is, outcomes of objectives are not limited to learnings that are in the form of knowledge increase or knowledge change. Others are in the form of product and performance outcomes.

Some instructional objectives result in outcomes that are in the form of increased knowledge. The evaluation of this type objective is through efforts that measure cognitive change in learners or students. This type objective is called a KNOWLEDGE OBJECTIVE.

Other instructional objectives have outputs that are in the form of product outcomes. Product producing objectives are typically associated with systems, but they also can be employed in classroom settings. For example, a product objective may result in learning that is in the form of a term paper, a grant proposal, a map, chart, or research design. This type objective is called a PRODUCT OBJECTIVE.

Finally, there are instructional objectives that result in performance outcomes. Performance outcomes are used to measure change in a person or persons in terms of an observable, measurable, and specified behavior pattern. This aggregate of behavior or cluster of behavior may or may not be verbal. Furthermore, the cluster of behavior indicating a change in the performance of a person or persons results not only from cognitive learning, but from a blending of cognitive, affective, and psychomotor learning. This type objective is called a PERFORMANCE OBJECTIVE.

The implementation of planned instructional objectives can be facilitated in two ways: First, through use of appropriate teaching methods with given objectives; and second, by determining and differentiating the nature of the objective in terms of learnings or outcomes likely to result through the attainment of that objective.

The following exercise is designed to assist you to become more precise in your selection of teaching method(s) for implementing particular objectives:

EXERCISE IDENTIFYING FACTORS THAT DISTINGUISH AMONG FOUR INSTRUCTIONAL METHODS OR MODELS

Directions:

Four teaching methods were identified and described in these materials. These methods were: *RECEPTION, SELECTION, INTERPERSONAL, and GROUP PROCESS.* Each method or model was described to identify particular characteristics, roles, and skills appropriate to each.

Read each of the following statements and in the space provided preceding the statement, indicate by writing the method of teaching, "R" for *RECEPTION;* "IP" for *INTERPERSONAL;* "S" for *SELECTION;* and "GP" for *GROUP PROCESS* which you consider most appropriate to that statement.

_____ 1. Is a strategy characterized by intercommunication among three or more people.

_____ 2. Is a method in which the learner has little or no control over the nature, quantity, or extent of the communication.

_____ 3. Is a method in which discourse or dialogue occurs in which terms are defined by mutual consent.

_____ 4. Is a strategy in which the teacher's role includes that of providing procedural information.

_____ 5. Is a method not too appropriate for achieving affective objectives.

_____ 6. Is a method or model in which the teacher orders or sequences the learning process, psychologically.

_____ 7. Is a strategy or method in which the assumption is made that the knowledge learned is likely to change over time.

_____ 8. Is a method that is most frequently encountered in teacher practices.

_____ 9. Is a strategy or method in which the teacher-student relationship is based upon persuasion and influence.

_____ 10. Is a method in which the teacher and learner are both overtly involved.

_____ 11. Is a method in which the production of knowledge is secondary to that of mediating or solving a problem or issue.

_____ 12. Is a method or model in which the time allotted for dealing with a problem situation is set by the learner.

_____ 13. Is a method or model in which there is little opportunity for the teacher to provide feedback.

_____ 14. Is a method or strategy in which the teacher uses content or knowledge as a vehicle for learning and not as an end in itself.

_____ 15. Is a method in which the learner uses mental operations of retrieval to verify what was taught.

EXERCISE FOR RELATING SELECTED OBJECTIVES TO METHODS OR MODELS OF TEACHING

Directions:

Read each of the following objectives carefully. Do not consider them in terms of their importance or desirability. As you read and study each objective, analyze it so as to identify the knowledge domain (Cognitive, Affective, Psychomotor) from which the content is derived and the mental processes essential to successfully learning what the objective asks. Use that information then to determine the method of teaching (*RECEPTION, GROUP PROCESS, SELECTION, or INTERPERSONAL*) that appears most appropriate to teaching and learning each objective listed.

Indicate your first choice of a method in Column A. In some cases you may wish to use more than one method; if so, show a combination of no more than two methods for any one objective by indicating your second method in Column B.

METHOD(S) USED

Column A	Column B		
_____	_____	1.	After one week of instruction in poetry, each sixth grade student will identify 10 of 15 major American poets.
_____	_____	2.	Having studied foods and provided an advertisement that makes four extravagant claims about a particular brand of bread, each eighth grade student will identify, list, and group the extravagant claims with 100% accuracy.

_____ _____ 3. Following the reading of selected parts of the "Federalist Papers," students in the 11th grade social studies class will develop cases, based upon conditions and facts from contemporary American society, that favor adoption of the Bill of Rights.

_____ _____ 4. After studying four or more speeches made by each of the candidates for President of the U.S. in 1972, students in the 12th grade class will determine which candidate is most likely to deal with the major problems facing our nation.

_____ _____ 5. Having read and discussed in small groups various materials related to the life and philosophy of Dr. Martin Luther King relative to racial equality, each student in the sophomore English class will make a 10-minute oral report indicating either an appreciation for or an objection to the philosophy of Dr. King.

_____ _____ 6. Given an assortment of ten rocks, the fourth grade student will analyze and determine, with 80% accuracy, those that are sedimentary, metamorphic, or igneous.

_____ _____ 7. Having read the unit on "Friends and Neighbors," the second grade class will propose standards of behavior for school with at least three standards based on the learnings from "Friends and Neighbors."

_____ _____ 8. Following one semester in a fine arts course, the senior high student will develop the skills to listen to music with some discrimination as to its mood and meaning, and with some recognition of the various musical elements and instruments that contribute to its total effect.

_____ _____ 9. The student will, after two months and without references and without prompting, develop a willingness to comply with safety regulations by removing jewelry and wearing non-conductive safety shoes while working on electronic equipment which is to be energized with electrical power.

_____ _____ 10. Following a lecture and demonstration, the Licensed Practical Nursing student will correctly list the six metric system prefixes in rank order from the largest to the smallest.

SUGGESTED RESPONSES

I. EXERCISE FOR IDENTIFYING FACTORS THAT DISTINGUISH AMONG FOUR INSTRUCTIONAL METHODS OR MODELS.

GP 1.	S 6.	GP 11.
R 2.	S 7.	S 12.
IP 3.	R 8.	R 13.
GP 4.	IP 9.	IP 14.
R 5.	IP 10.	R 15.

II. EXERCISE FOR RELATING SELECTED OBJECTIVES TO METHODS OR MODELS OF TEACHING.

Column A	Column B	Column A	Column B
1. R		6. R	S
2. S		7. GP	
3. GP		8. IP	S
4. GP	S	9. IP	GP
5. S	GP	10. R	

AVAILABLE REFERENCES and MATERIALS

Bernabei, Raymond. Behavioral Objectives: A Self-Instructional Slide-Audio Tape Program. (Four series of slides and tapes on identifying, writing, and analyzing behavioral objectives). Doylestown, Pennsylvania: Bucks County Public Schools, Intermediate Unit #22, Division of Curriculum and Instruction, ($85.00), 1968.

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